

Clean Cities University: A Worldwide Perspective

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This presentation discusses alternative fuels outreach work in the Monterrey, Nuevo Leon area, why the area was chosen, the outreach process and the subsequent opportunities and challenges for alternative fuel.

The International Clean Transportation Corridor (ICTC-3)

The International Clean Transportation Corridor was established by the U.S. Department of Energy and the Texas General Land Office in response to the concomitant decrease in air quality and the increase in NAFTA-related commercial traffic along the Interstate 35 Corridor. The Corridor Program was designed to support the use of alternative fuels and fuel-efficient technologies and promote their use in heavy- and medium-duty vehicles along Interstates 35 and 29. Directed by Gladstein & Associates (G&A), the ICTC-3 builds upon the successes of G&A's sister project, the Interstate Clean Transportation Corridor, (ICTC). Founded in 1996, the ICTC is a first-of-its-kind project- a successful alternative fuel infrastructure and trucking system on the interstate highways of California, Arizona, Nevada and Utah.

Currently, the International Clean Transportation Corridor covers the 1900-mile section of Interstate Highways 35 and 29 (I-35 and I-29). It connects eight *Clean Cities* and starts in Monterrey, Nuevo Leon, Mexico, crosses the border in Laredo, Texas to Kansas City, Missouri where I-29 continues up to Grand Forks, North Dakota and over the Canadian border to Winnipeg, Manitoba. The five Corridor *Clean Cities* in Texas are Laredo (emerging), San Antonio, Austin, and Dallas-Fort Worth. Although not directly located on the Corridor, Houston is considered to be a Corridor *Clean City* because of the number of vehicles traveling between Houston and Austin and San Antonio.

The ICTC-3 works with trucking fleets, the DOE's *Clean Cities*, state and local organizations and businesses along the Corridor, as well as engine and equipment manufacturers, fuel suppliers and federal agencies, to develop and expand the use of these technologies. Greater use of alternative fuels will contribute to improved air quality, increased public health benefits, greater economic development and reduced dependence on foreign oil.



International Perspective

Each of the three countries connected by the ICTC-3 has a different set of interests and concerns that provide economic as well as environmental reasons to support the use of alternative fuels. All three countries are natural gas and propane producers, (fuels which support existing current medium- or heavy-duty engines technologies) and all three are manufactures of fueling site equipment and vehicles. All three have seen huge increases in NAFTA-related truck traffic. In addition, the United States shares air sheds with both Mexico and Canada. Each country has concerns about air quality and recognizes that vehicle emissions need to be reduced in order to realize lower levels of pollution.

The ICTC-3 programs works with participants in each country to provide technical information and outreach about current technologies, station development and fleet deployment in cities along the corridor in order to develop the infrastructure for the use of these alternative fuel and fuel-efficient technologies.

Area of Focus-Laredo, Texas

With the adoption of the North American Free Trade Agreement (NAFTA) in 1994, trade between the United States and Mexico has exploded. Commercial cross-border traffic has soared by 170% and is projected to increase even further. About half of Mexico's imports are raw materials used in the *maquiladora*, or assembly, industry, which produces finished goods that are then exported back to the United States. Large numbers of *maquiladoras* are located in the Nuevo Laredo, Tamaulipas, Monterrey, Nuevo Leon and Saltillo, Coahuila region of Mexico.

Because of the substantial numbers of heavy- and medium-duty trucks flowing across the border in Laredo, the Corridor's southern anchor is a key area of importance to the ICTC-3. Monterrey, Nuevo Leon and Laredo, Texas, process over 35% of all Mexico – U.S. goods transported via land (\$28.4 billion in exports and \$27.4 billion in imports in 1998). Since NAFTA, the Laredo MSA (population: 200,000) is the fastest growing in Texas and the second fastest growing in the U.S. for the past four years according to the U.S. Census Bureau.

Laredo is the only U.S./Mexico border city strategically positioned at the convergence of all land transportation systems. Mexico's principal highways and railroads converge at Laredo to meet two major U.S. rail lines and Interstate 35, one of the U.S.'s principal NAFTA Trade Corridors. Laredo is also the only border city with bridges into two of Mexico's fastest developing industrialized States: Nuevo Leon and Tamaulipas.

Area of Focus-Monterrey, Nuevo Leon, Mexico

Monterrey is not only the capital of Nuevo Leon, but is also our southern neighbor's third largest city, (pop. 4 million). Monterrey is the country's largest industrial center and the goods distribution center for all of northern Mexico. It is also a crossroads for the famous Pan American Highway, long the primary route for commerce between the Americas. Over 10,000 industrial and service business are located there, as are approximately 1.5 million motor vehicles.

Unfortunately for Monterrey, Laredo and much of the region, increased trade has brought with it a raft of environmental problems, not the least of which is rapidly deteriorating air quality. Although stationary sources play a significant role, transportation is widely recognized as a major source of air pollution. Heavy-duty diesel trucks transport the majority of the goods traded by Mexico and the U.S. The volume of trucks carrying freight over the Laredo/Nuevo Laredo border has increased by approximately 120% since the passage of NAFTA, and is expected to continue to grow. In 1999 alone, nearly 2.8 million truck crossings (nearly 2 times all other Texas border ports *combined*) occurred between Mexico and Laredo, making it one of the busiest truck ports in the United States. That works out to an average of over 7,600 truck crossings across Laredo's four bridges *each and every day!* Unless more is done soon to address the growing problem of pollution from NAFTA-related truck traffic in Mexico, both countries will continue to suffer.

Monterrey possesses a variety of unique characteristics that makes it an ideal candidate for outreach and education on the benefits and uses of alternative and fuel-efficient vehicle technologies. For example, Monterrey produces its own natural gas and propane, the fuels best positioned for use as alternatives to diesel; has a largely untapped market for natural gas in transportation; has a large number of heavy- and medium-duty diesel return-to-base fleets traveling to and from the border, which supply *maquiladoras* and local U.S. owned companies; and is a city with many unique natural attractions that see regular use by the local citizens who have demonstrated considerable local interest in enjoying and protecting their environment.

Trade Delegation to Monterrey

The ICTC-3 program submitted a winning proposal to the DOE's Office of Transportation Technology, Energy Efficiency and Renewable Energy to expand Corridor outreach into

Monterrey through alternative fuel education efforts and an Alternative Fuel Trade Delegation to Monterrey. The Trade Delegation was designed to serve several purposes:

- 1) To provide a foundation for the development of AFV infrastructure and vehicle deployment in other areas of Mexico and Latin America;
- 2) To bring U.S. and Mexican alternative fuel industry personnel together with Monterrey-based companies operating fleets;
- 3) To educate government and private sector fleets about the economic and environmental benefits of using an alternative fuel; and
- 4) To develop additional markets for U.S. alternative fuel manufacturers and suppliers. Opening the alternative fuel market in Mexico to include transportation uses provides U.S. alternative fuel equipment suppliers and vehicle and engine manufacturers with a broader customer base, which increases sales and strengthens the overall economic viability of their products. This could have a profound impact on increasing the economic competitiveness of AFV product in the U.S.

Increased use of alternative fuels in Mexican trucks not only provides an opportunity to fuel suppliers in Mexico, but in the U.S. as well. If growing numbers of Mexican trucks, particularly those granted access to the U.S., use alternative fuel; this will reduce demand on U.S. distillate stocks. Such a scenario will also increase demand for these fuels along key U.S. transportation corridors, facilitating the development of this market in the U.S.

Trade Delegation

At the time of this writing the Trade Delegation had not yet taken place. The Delegation will consist of a variety of companies in the AF industry from both Mexico and the United States. The Delegation is scheduled to make full use of their time in Monterrey learning about the market potential, networking and meeting prospective clients, participating in a visit to a local natural gas company, networking at a reception with local businesses, participating in a market briefing dinner with the U.S. Commercial Service, making an alternative fuels presentation to the Board of Directors of the American Chamber of Commerce and most importantly, hosting an Alternative Fuels Seminar with speakers from local universities and government. During the Seminar, Delegation Members will have the opportunity to present their technologies and highlight current U.S. and Mexico applications.

H.E. Butt Grocery Stores, a National *Clean Cities* award recipient in 1999, has generously offered to sponsor the Trade Mission's Welcome Reception. In addition, they are presenting their Houston LNG success story at the Alternative Fuels Seminar and to the American Chamber's Board of Directors. H.E. Butt is itself a true international company with stores in Texas, Louisiana, Monterrey and Saltillo.